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ABSTRACT

This study compared the career choices of high school seniors to the actual occupations they entered four years after graduation, to determine the extent to which high school seniors can predict career choices. The Indiana Vocational Technical College (IVTC) Questionnaire, Post High-School Educational and Career Plans of Senior Students was used on a population from three central Indiana public schools. It was found that individuals frequently changed their career choices after graduation. Their occupational grouping perception (white-collar versus blue-collar) and the geographic employment locale were predicted inaccurately. Though more planned post-secondary education than were ultimately involved in it, the plans of those who entered post-secondary education did not change. In view of the poor predictive ability of high school seniors in regard to their careers, it is recommended that: (1) schools should provide activities and experiences that promote viable career choices; (2) attention should be given to providing post-high school occupational training; (3) state level education programs should explore the career education concept; (4) research should be done on the role and influence of economic and cultural conditions in career choice; and (5) longitudinal research studies should be undertaken to shed light on career choice. (Author/KS)

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THE PREDICTABILITY OF CAREER CHOICES OF HIGH SCHOOL SENIORS[1]

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This investigation was designed to make a contribution to the predictability of career choices of high school seniors. The investigation was specifically directed toward the need of information found in the follow-up of graduates.

The review of research literature indicated that career choices of high school students were not highly predictable. However, the literature provides limited evidence of research in measuring the predictability of career choices of high school seniors.

Problem and Objectives of the Study

The problem to be examined is whether or not high school graduates are entering into careers that they chose as seniors. Specific attention was directed toward the career choices of individuals made as high school seniors, and a comparison was made to the actual occupations entered by these people four years later.

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[1]Paper presented at the American Educational Research Association Meeting, Special Interest Group on Career Education-Career Guidance, San Francisco, California, April 21, 1976.

This study was oriented to achieve the following basic objectives:

1. To identify the characteristics of selected 1969 high school graduates of three Central Indiana high schools.

2. To describe what changes occurred between 1969 and 1973 in proportions of these high school seniors planning to seek employment or continuing their education.

3. To determine at what stage in their career development process these graduates first become interested and decided upon their career choice.

4. To analyze what differences existed between the present employment status of the 1969 high school graduating class and reported career choices made as a senior in high school.

5. To determine where the 1969 graduates were employed in terms of geographic locale.

Assumptions

In the development of the follow-up study the following assumptions were made:

1. There is a need for the follow-up of graduates in order to more accurately predict employment trends of students.

2. The questionnaire developed by the author utilized the content of the 1969 Indiana Vocational Technical College (IVTC) Questionnaire, Post-High School Educational and Career Plans of Senior Students, in comparing the follow-up study in the examination of high school seniors of Hauser, Shelbyville, and Southwestern High Schools to their responses four years later.

Some Limitations of Follow-Up of Graduates

The element of follow-up of graduates has been given little attention due to the mobility and response of graduates. Most of the emphasis in post high school follow-up efforts has been

concentrated on immediate graduates (one year after graduation from high school). Little emphasis, due to the problem of locating graduates, has been actually given to the employment histories, post-high school training and major influences of career occupational decisions.

A further limitation is that many existing devices and procedures for follow-up of graduates are so indirect that little opportunity is provided to review instruments for specific programs, particularly those in vocational areas.

Educational and vocational choices of individuals may be limited both by the individual's inherent characteristics and by the opportunities available.

The individual must have skills that will allow them to use information in a rational and emotionally acceptable manner. This person must be aware of his own potentialities and capacities, his own basic interests and personality characteristics, his own abilities and aptitudes, and/or should have as much information as possible about the opportunities that await him.

Population

The population consisted of 1969 high school seniors in three Central Indiana public high schools.

In March, 1969, Hauser High School, Southwestern High School and Shelbyville High School seniors completed a survey (Post-High School Educational and Career Plan of Senior Students) in conjunction with Indiana Vocational Technical College (IVTC) and the Office of Manpower Studies School of Technology, Purdue University.

The IVTC survey of the 1969 seniors in Indiana high schools reported plans and aspirations after graduation from high school together with some of their related socio-economic characteristics. Included in the IVTC survey, 75,000 High School Seniors, Their Educational and Vocational Plans (1970), were the types of high school programs they were enrolled in and their grade averages, the size of the communities they lived in, the occupation and level of education of the head of the household and the vocation or profession they hoped to enter. Also shown were their plans for school or employment after graduation (including program choice, where they intended to be employed), when they made their choice and who influenced them most.

The data from the IVTC survey was used as a foundation for this investigation. Three Central Indiana schools were selected from the IVTC survey and the 1969 high school graduates of these schools were followed up to determine their current occupational status. There were 307 graduates identified, which constituted the population investigated.

The graduates were mailed a twenty-two item questionnaire that paralleled the Indiana Vocational Technical College (IVTC) questionnaire administered to them when they were high school seniors.

A letter and return questionnaire form with a self addressed envelope were mailed to the graduates. A second mailing was made two months later to the non-respondents.

Table 1 lists the rate of return from each of the high schools. A usuable rate of return of 68.4 percent was obtained.

Table 1. Rate of return for each school and for the total population.

	1969 Graduate	Response to Questionnaire	Percent
Hauser High School	84	35	41.1%
Shelbyville High School	181	154	85.1%
Southwestern High School	42	21	50.0%
	307	210	68.4%

To determine an index of non-respondent bias a random sample of thirty graduates of those not responding was selected. The non-respondent sample was contacted by mail, telephone, personal contact, and interview to obtain completed questionnaires. Basically the two groups were equivalent, with the exception of high school concentration.

Statement of the Problem

Specific attention was directed toward the career choices which individuals predicted as high school seniors. A comparison was made to the actual occupations entered by these people four years later.

The following research questions were formulated to guide the development of the project:

1. What were the characteristics of selected 1969 high school graduates of three Central Indiana high schools?
2. What changes occurred between 1969 and 1973 in proportions of these high school seniors planning to seek employment or continuing their education?
3. At what stage in their career development process did these graduates first become interested in and decide on their career choice?
4. What differences existed between the present employment status of the 1969 high school graduating class and their reported career choices made as seniors in high school?
5. Where were the 1969 graduates employed in terms of geographic locale?

The research design and data collection practices were selected and implemented to answer the five research questions.

General Research Design

The research design selected was the survey method for data collection. The chi-square test and percentages were used to analyze test results.

The chi-square test was used to analyze both the traits of respondents and non-respondents as well as 1969 respondents and the 1973 respondents to determine significant differences present between the two groups because of low survey return. The design for contingency tables with small cell size, correcting for continuity as found in Garrett (1966) was used. The formula reads:

$$X_c^2 = \frac{N\ (AD-BC - N/2)^2}{(A+B)\ (C+D)\ (A+C)\ (B+D)}$$

where:

N = Size of population

ABCD = Respective cell

Contingency tables were constructed for the purpose of studying the relationship between the variables. Using the chi-square test of significance, it was possible to test the hypothesis of relationship between the variables.

COMPARISON OF 1969 SENIORS TO FOLLOW-UP STUDY

Research Question One

What were the characteristics of selected 1969 high school graduates of three Central Indiana high schools?

A survey of graduating seniors in Indiana high schools was undertaken in 1969 to identify their post-high school and vocational plans. The survey revealed their: (1) characteristics, (2) head of household characteristics, (3) vocational and employment aspirations, and (4) post-high school plans.

Comparisons. The IVTC survey consisted of 167 males and 124 females. The follow-up study consisted of equal proportions of males and females. No significant differences were found between the proportions of males and females in the two surveys as reported in Table 2.

Table 2. Distributions by characteristics

Characteristics	IVTC Study (1969)		Follow-up Study (1973)	
Male	167	(55.5)	105	(50.0)
Female	134	(44.5)	105	(50.0)
	301		210	

$X^2 = 1.49$ df = 1 P = .22

Numbers in parenthesis are expressed as percentages.

High School Grade Average. There was little variation between the high school grade average of the two groups as shown. Most of the individuals reported their high school grade average as B; with C the next largest percentage of grades reported.

High School Concentration. A significant difference did appear in the reporting of high school concentration as reported by the high school graduates. Table 3 contains a comparison of high school concentration.

Table 3. Characteristics of the high school seniors by high school concentration

High School Concentration				
College Preparatory	137	(49.8)	90	(43.0)
Vocational Education	42	(15.3)	15	(7.2)
Business Education	55	(20.0)	19	(9.1)
General Education	41	(14.9)	85	(40.7)
Total	275		209	

$X^2 = 47.42$ df = 3 P = .00

Numbers in parenthesis are expressed as percentages.

Research Question Two

What changes occurred between 1969 and 1973 in proportions of these high school seniors planning to seek employment and continuing education?

The chi-square analysis revealed a highly significant difference between the perception of plans after graduation of the 1969 high school seniors and the actual employment four years later. Table 4 reports the results of this analysis.

Table 4. Occupational and educational plans immediately after graduation from high school

Characteristics	IVTC Study (1969)		Follow-up Study (1973)	
Immediate Employment	67	(22.5)	91	(43.3)
Full-time Education	135	(45.3)	87	(41.4)
Full-time Employment and Part-time Education	19	(6.4)	3	(1.4)
Part-time Employment and Part-time Education	44	(14.8)	7	(3.4)
Military Service, no further Education	8	(2.7)	9	(4.3)
Military Service, then Education	17	(5.6)	3	(1.4)
Marriage, no further Education	8	(2.7)	10	(4.8)
Total	298		210	

$X^2 = 48.81$ df = 6 P = .00

Numbers in parenthesis are expressed as percentages.

The responses of the 1969 seniors concerning plans after graduation relative to immediate employment doubled, as 43.3 percent indicated they were immediately employed after graduation, when only 22.5 percent had planned immediate employment in 1969.

Over forty-five percent of the high school seniors planned to continue their education full-time after graduation. However, 41.4 percent actually pursued full-time education after graduation. Fewer graduates indicated full-time employment and part-time education (1.4 percent in the 1973 survey) than was reported in the 1969 survey.

There was a decline from 14.8 percent to 3.4 percent of those entering part-time employment and part-time education as shown in Table 4. Geographic location could play a part in those considering part-time education. There are very few centers in the Columbus, Franklin, and Shelbyville area for an individual to pursue post-secondary educational objectives. Indianapolis is the nearest major center for educational programs.

The plans of the population in the choosing of a vocation or profession changed significantly as the graduates matured. As high school seniors, in excess of 29 percent stated their plans were definite, 48 percent stated their occupational plans were almost definite and 22.9 percent stated their vocational plans were indefinite. Four years after graduation 59.5 percent of the graduates were definite in their vocational plans toward a career, 22.9 percent stated almost definite and 17.6 percent reported indefinite plans. This was expected because high school senior plans were not finalized.

A third piece of evidence related to changes in high school plans concerned post-secondary education as indicated in Table 5. Each individual who planned to continue an education was asked to indicate: (1) the college or university preferred, (2) the curriculum majored in, (3) how many times the major curriculum had been changed while attending post-secondary education institutions, and (4) how many years of post-secondary educational training had been completed and/or whether the individual had graduated from that post-secondary institution.

Table 5. Progress toward the completion of a post-secondary education or training program.

Characteristics	Frequency of Respondents Follow-up (1973) Number	Percent
Major		
Academic Curriculums	63	65.6%
Industrial Curriculums	8	8.3%
Non-Industrial Curriculums	25	26.1%
Totals	96	100.0%
Changed Major		
Yes	17	17.7%
No	78	81.2%
Plan to Change	1	1.1%
Totals	96	100.0%
Complete Years of Post-Secondary Training		
Less than One	8	8.3%
One	9	9.4%
Two	11	11.4%
Three	47	49.4%
Graduated	21	21.9%
Totals	96	100.0%

Research Question Three

At what stage in their career development process did these graduates first become interested and decided on their future course?

As seniors nearly 13 percent reported their first interest in a chosen vocation was made while in the elementary grades. Nearly 30 percent reported first interest in junior high school and 57.2 percent had their first interest in high school. Seventy high school graduates reported their first interest in a chosen vocation after graduation.

Of those deciding upon a vocation, less than 3 percent decided upon their career choice in their elementary grades, 6.2 percent in junior high school, and 91.0 percent in high school.

One hundred twenty-nine high school graduates reported that they made their decision relative to a vocation after graduation as shown in Table 6. Due to the high number who made their decision after graduation, a significant difference appeared.

During the 1973 follow-up, students reported that the greatest influence on their career choices were their own feelings.

The second greatest influence in career choice were relatives.

According to the 1969 seniors, a high school teacher made an important influence or vocational plans. After graduation, the role of the high school teacher declined and other influences ranked higher in influencing career choices of the graduates.

Table 6. First interest in and decision on chosen vocation, and person most influencing career choice.

First interest in chosen	IVTC Study (1959)		Follow-up Study (1973)	
Elementary grades	38	(12.9)	10	(7.2)
Junior high school grades	88	(29.9)	58	(41.4)
Senior high school grades	168	(57.2)	72	(51.4)
Total	294		140	
$X^2 = 7.15$ df = 2 P = .03				
Decided on chosen vocation				
Elementary grades	8	(2.8)	2	(2.5)
Junior high school grades	18	(6.2)	17	(21.0)
Senior high school grades	263	(91.0)	62	(76.5)
Total	289		81	
$X^2 = 16.10$ df = 2 P = .00				
Person influencing career choice				
Relative	56	(20.2)	45	(26.8)
Friend	35	(12.6)	18	(10.7)
High school teacher	47	(17.0)	20	(11.9)
School counselor	5	(1.8)	5	(3.0)
My own efforts	134	(48.4)	80	(47.6)
Total	277		168	
$X^2 = 4.74$ df = 4 P = .31				

Numbers in parenthesis are expressed as percentages.

Peer relationships proved important because 12.6 percent of the 1969 seniors reported that friends influenced their career choices, but declined to 10.7 percent after graduation.

The role of the guidance counselor was perceived to a lesser degree: 1.8 percent in comparison with other persons influencing career choice. However, the graduates reported more influence of the school guidance counselor when followed up four years later.

Research Question Four

What differences existed between the present employment status of the 1969 high school graduating class with reported career choices made as a senior in high school?

The vocational or professional career choices of high school seniors in 1969 varied with the same individuals four years later as reported in Table 7. Significant difference between career choice and career attainment appeared at the professional, semi-professional and managerial group level. As seniors, 64.2 percent specified the "white collar" level as their career choice, but four years later only 35.6 percent had attained this level. Therefore, many of the seniors aspired to a "white collar" level career choice, but did not reach that goal.

Little differences in career choice appeared in the clerical and sales occupations, service non-manufacturing occupations.

A major difference resulted in the manufacturing and related activities as a career choice.

Table 7. Vocational or professional career choices

Chosen occupational group	IVTC Study (1969)		Follow-up Study (1973)	
Professional, Semi-professional, and Managerial Groups	174	(64.2)	72	(35.6)
Clerical and Sales Occupations	43	(15.9)	32	(15.8)
Service Occupations	16	(5.9)	22	(10.9)
Agricultural Occupations	7	(2.6)	7	(3.5)
Manufacturing Occupations	15	(5.5)	44	(21.8)
Non-manufacturing Occupations	5	(1.8)	15	(7.4)
Miscellaneous Occupations	11	(4.1)	10	(5.0)
Total	271		202	

$X^2 = 55.27$ df = 6 P = .00

Numbers in parenthesis are expressed as percentages.

Research Question Five

Where were the 1969 graduates employed in terms of geographic locale?

The Indiana Vocational Technical College survey listed five employment locales. Those were: (1) in my city or area, (2) in my county, (3) within fifty miles of home, (4) in Indiana and (5) no preference. Due to the migration studies of numerous counties as found in Labor Indiana (1973), it was felt that a sixth employment locale should be added (out-of-state employment).

A significant difference did appear in the perception of those graduates concerning employment in their city or area and in the response to the question "no preference" in relation to employment locale. The survey revealed that the graduates were not aspiring for employment more distant from home.

Conclusions

The major thrust of the investigation was to answer a very basic question--Can high school seniors predict their occupational career choice while in high school?

Five research questions were developed to investigate the accuracy of high school seniors predicting their occupational choice. Based on the results of the study the following conclusions are presented:

1. The 1969 graduates, when seniors, compared with their responses of the 1973 follow-up study, were similar in the characteristics relating to proportion of males and females and high school grade averages. However, there were differences in their perception of high school concentrations.

2. The graduates were not accurate in their predictions relative to immediate employment after graduation. The high school graduates projected more involvement in post-secondary education and less indication of employment. However, the opposite actually happened.

3. The graduates were not accurate in their prediction in the comparison of how definite they were in vocational planning and selection of career choice. As would be expected, the graduates became more definite in career planning after graduation from high school.

4. The 1973 follow-up revealed that as time after graduation increased so did the point at which the person became interested in and decided upon his/her career choice.

5. The students were not accurate in their perceptions of plans for professional, semi-professional, and managerial jobs and manufacturing occupations. It could be concluded that the students in school had perceived their employment in "white collar" areas but actually when they were employed obtained "blue collar" jobs.

6. The graduates were not accurate in their predictions of employment locale. It can be concluded that the graduates perceived a need to leave the area but, when graduated from school, were employed in their local area.

7. The post-secondary educational plan of the students were stable. A majority of the students did not change their academic plans once they were at a post-secondary institution.

8. The population reported the most influential force in the career choice process was their own feelings. They rated their own efforts toward determining a career choice above that of high school counselors, high school teachers, friends and relatives.

9. The graduates did change career choices after graduation. It could be concluded that the employment patterns of the graduates were not stable, as approximately 50 percent of the graduates had changed jobs one or more times in the four years after graduation.

Recommendations

The following five recommendations relate to this study. The first two recommendations relate to school officials and school personnel and the last three recommendations relate to the need for further study.

Recommendations based on this study, warrant the following:

1. Schools should provide high school students activities and experiences which will assist those students in making viable career choices.

2. Attention should be given to providing post-high school occupational training for high school graduates due to low career choice predictability while in high school.

3. State level education program planners should examine the potential of the career education concept for alleviating indecisive career choices of high school seniors.

4. Further research studies should be made to determine the role and influence of economic conditions and cultural conditions affecting the career choices of high school seniors while in high school compared to economic conditions and cultural conditions after graduation from high school.

5. Longitudinal research studies should be initiated to provide a comprehensive data base for career choice decisions of high school graduates which has implications for local, regional, and state program planning.

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